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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,167	10/12/2001	Frederick Paul Benning	ROC920010111US1	1982

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EXAMINER
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AHMED, SHAMIM

ART UNIT	PAPER NUMBER
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1765

DATE MAILED: 10/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/976,167

Applicant(s)

BENNING ET AL.

Examiner

Shamim Ahmed

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 41-50 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 41-50 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments with respect to claims 1-40 have been considered but are moot in view of the new ground(s) of rejection.

Applicants argue that Robert does not cure the deficiency of Hartog, namely does not suggest that the surfactant is precipitated on a surface as claimed because Robert reference illustrates that the surfactant (sodium octyl sulfate) is used to form a hydrophilizing composition.

First of all, examiner clarify that the claim 14 was rejected over Hartog in view of Robert and relied upon the teaching of Hartog of item 5 in the previous office action.

In response to the argument, examiner states that the argument is not persuasive because Robert reference is applied to show the use of anionic surfactant including hydrophobic section and Robert's surfactant such as sodium octyl sulfate has a hydrophobic section as it is exactly same as the instant invention and expected to have similar effect such as precipitated or adsorbed on the surface of the substrate or on the colloidal particles.

Applicant's arguments are not commensurate with the claims because the claims are limited to a composition not a process.

Therefore, as long as the reference teaches the use of a surfactant having a hydrophobic section that meets the claim's limitation and the composition is capable of the intended use of the composition.

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Applicants further argue that the none of the cited prior art teaches the claimed composition with a surfactant that will precipitate or adsorbed on the surfaces as claimed.

In response to the argument, examiner states that the argument is not persuasive because modified Hartog et al teach the pH of the composition falls with in the claimed range along with the same surfactant and expected to have similar effect (see the rejection).

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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4. Claims 41-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartog et al (6,236,542) in view of Roberts (5,723,181).

Hartog et al disclose a cleaning polish etch composition comprises a carrying fluid such acid, neutral or base solution and metal etchant such as aluminum nitrate or cerium sulfate, which resemble as the claimed metal etchant or any other etchant depending on the substrate for etching the substrate and/or the attached slurry particles (col.4, lines 19-28, col.5, lines 60-col.6, lines 17).

Hartog et al teach that the substrate is a silicate based glass disk (col.4, lines 12-25).

As to claims 43-44, Hartog et al teach that the pH of the composition could be above 3.0, which reads on claimed pH equal to less than 7 (col.5, lines 40-43).

Hartog et al fail to teach the introduction of specific surfactant having hydrophobic section that forms a steric hindrance barrier between the substrate and the colloidal particles (claim 41), wherein the surfactant is sodium octyl sulfate in the composition (claim 42).

However, Roberts teaches that surfactant such as sodium octyl sulfate is used in a colloidal silica composition for changing the surface chemistry and resulted surface is more susceptible to the surface processing (col.1, lines 49-60 and col.2, lines 46-53).

Therefore, it would have been obvious to one of ordinary skilled in the art at the time of claimed invention to combine Roberts's teaching into Hartog et al's composition for enhancing the polishing of the surface by changing the surface chemistry as taught by Roberts.

It is noted that the combined teaching of Hartog et al's surfactant is precipitated onto the surface and creating the steric hindrance as claimed because the surfactant is exactly same as the instant invention and expected to have the same property as the claimed one such as the surfactant is precipitated onto the surfaces.

5. Claims 45-50 are rejected under 35 U.S.C. 103(a) as being unpatentable Hartog et al (6,236,542) in view of Kuroda (6,268,979) and further in view of Burton et al (6,083,838).

Hartog et al discuss in the paragraph 4 above and also al teach that the colloidal particles have a size in the range of 0.001-1  $\mu\text{m}$  (1-1000nm) that falls within the claimed range of 2-200 nm (col.6, lines 25-29).

Hartog et al remain silent that the glass substrate is aluminosilicate glass.

However, Kuroda illustrates that glass substrate, preferable aluminum silicate glass is used for magnetic data storage device, which glass is weather resistant (col.3, lines 20-44).

Therefore, it would have been obvious to one of ordinary skilled in the art at the time of claimed invention to modify Hartog et al's glass substrate with Kuroda's teaching for producing a storage device with weather friendly as taught by Kuroda.

Modified Hartog et al fail to teach the use of claimed surfactant such as an ethylene oxide propylene oxide block polymer.

However, Burton et al disclose a CMP slurry composition containing abrasive and a surfactant is used to increase the polishing capability by increasing the viscosity

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of the slurry, wherein the surfactant is propylene oxide-ethylene oxide block copolymer (col.3, lines 62-65 and col.4, line 64-col.5, line 9).

Therefore, it would have been obvious to one of ordinary skilled in the art at the time of claimed invention to combine Burton et al's teaching into modified Hartog et al's teaching for increasing the polishing efficiency by introducing the improved surfactant as taught by Burton et al.

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Evers et al ((5,707,948) and Sirianni (6,140,300) teaches cleaning composition/process using surfactant.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

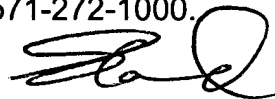
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shamim Ahmed whose telephone number is (571) 272-1457. The examiner can normally be reached on M-Thu (7:00-5:30) Every Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine G. Norton can be reached on (571) 272-1465. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Shamim Ahmed  
Primary Examiner  
Art Unit 1765

SA  
October 15, 2006